Amendments to the Claims:

This listing of the claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1 (Cancelled).

2 (Currently Amended). The method according to claim 28 for inhibiting cell proliferation for the treatment of malignancies in mammals, wherein the mammal is one in need of treatment of a malignancy.

3 (Currently Amended). The method according to claim 28 for inhibiting growth-factor dependent tumors, wherein the mammal is one in need of inhibition of a growth-factor dependent tumor.

4 (Currently Amended). The method according to claim 28 for inhibiting human breast carcinoma cell proliferation, wherein the mammal is one in need of inhibition of human breast carcinoma cell proliferation.

5 (Currently Amended). The method according to claim 4 for treatment of human breast carcinomas, wherein the mammal is one in need of treatment of human breast carcinoma.

6 (Currently Amended). The method according to claim 28 for inhibiting the growth stimulatory effect of insulin on tumor cells, as mediated, at least partially, by the insulin receptor substrate-1 (IRS-1)/growth-factor

receptor-associated binding protein-2 (GRB2) pathway, wherein the mammal is one in need of inhibition of the growth stimulatory effect of insulin on tumor cells.

7 (Currently Amended). The method according to claim 28 for inhibiting the mitogenic responses in tumor cells to one or more receptor kinases, growth factors and cytokines of the group consisting of IGF-1, IL-4 and IL-9, for all of which IRS-1 is a substrate, for the treatment of tumors, wherein the mammal is one in need of treatment of a tumor.

8 (Currently Amended). The method according to claim 28 for inhibiting basal and insulin-induced tumor cell proliferation for the treatment of human breast cancers, wherein the mammal is one in need of treatment of human breast cancer.

9-27 (Cancelled)

28 (Currently Amended). A method for treating tumors in mammals or for inhibiting tumor cell proliferation in mammals, comprising administering to a mammal in need thereof an effective amount of an active agent selected from the group consisting of:

(a) leptin;

(b) a mutein of leptin having at least 60% identity with the sequence of a leptin and has the ability to ~~block~~ inhibit the IGF-I induced or insulin-induced ~~cell~~

proliferation of the human breast cancer cell line T-47D or MCF7, or having a sequence encoded by a nucleic acid ~~which~~ that hybridizes to a nucleic acid which encodes leptin under stringent conditions that include washing conditions 12-20°C below the calculated Tm of the hybrid under study, and has the ability to ~~block cell~~ inhibit the IGF-I-induced or insulin-induced proliferation of the human breast cancer cell line T-47D or MCF7;

(c) a fragment of one of (a) or (b) which has the ability to ~~block cell~~ inhibit the IGF-I-induced or insulin-induced proliferation of the human breast cancer cell line T-47D or MCF7;

(d) a fusion protein comprising (a), (b) or (c);

(e) a salt of any of (a)-(d); and

(f) a functional derivative of any of (a)-(d) which includes one or more polyethylene glycol side chains formed by means of functional groups which occur as side chains of any of (a)-(d), aliphatic esters of one or more carboxyl groups, amides of one or more carboxyl groups by reaction with ammonia or with primary or secondary amines, N-acyl derivatives of one or more free amino groups of the amino acid residues formed with acyl moieties and/or O-acyl derivatives of free hydroxyl groups formed with acyl moieties.

29 (Previously Presented). A method in accordance with claim 28, wherein said active agent is leptin.

30 (Currently Amended). A method in accordance with claim 28, wherein said active agent is a mutein of leptin having at least 60% identity with the sequence of a leptin and has the ability to ~~block cell~~ inhibit the IGF-I-induced or insulin-induced proliferation of the human breast cancer cell line T-47D or MCF7.

31 (Currently Amended). A method in accordance with claim 28, wherein said active agent is a mutein of leptin having a sequence encoded by a nucleic acid which hybridizes to a nucleic acid which encodes leptin under stringent conditions that include washing conditions 12-20°C below the calculated Tm of the hybrid under study, and has the ability to ~~block cell~~ inhibit the IGF-I-induced or insulin-induced proliferation of the human breast cancer cell line T-47D or MCF7.

32 (Currently Amended). A method in accordance with claim 28, wherein said active agent is a fragment of (a) or (b) of claim 28, which has the ability to ~~block cell~~ inhibit the IGF-I-induced or insulin-induced proliferation of the human breast cancer cell line T-47D or MCF7.

33 (Currently Amended). A method in accordance with claim 32, wherein said active agent is a fragment of leptin

which has the ability to ~~block cell~~ inhibit the IGF-I-induced or insulin-induced proliferation of the human breast cancer cell line T-47D or MCF7.

34 (Previously Presented). A method in accordance with claim 28, wherein said active agent is a fusion protein comprising (a), (b) or (c) of claim 28.

35 (Previously Presented). A method in accordance with claim 34, wherein said active agent is a fusion protein comprising leptin.

36 (Cancelled).

37 (Currently Amended). A method in accordance with claim 28, wherein said active agent comprises a mutein of leptin having at least 70% identity with the sequence of a leptin and has the ability to ~~block cell~~ inhibit the IGF-I-induced or insulin-induced proliferation of the human breast cancer cell line T-47D or MCF7.

38 (Currently Amended). A method in accordance with claim 28, wherein said active agent comprises a mutein of leptin having at least 80% identity with the sequence of a leptin and has the ability to ~~block cell~~ inhibit the IGF-I-induced or insulin-induced proliferation of the human breast cancer cell line T-47D or MCF7.

39 (Currently Amended). A method in accordance with claim 28, wherein said active agent comprises a mutein of

leptin having at least 90% identity with the sequence of a leptin and has the ability to ~~block cell~~ inhibit the IGF-I-induced or insulin-induced proliferation of the human breast cancer cell line T-47D or MCF7.